Memo

## · Work Order ID 58205-2

Thursday, April 29, 2010 10:36:43 AM

**Quality Control** 



Page 1

Item ID: D3637-041 Accept Setup Start Revision ID: Stop Item Name: Bracket Assembly Start Date: 4/29/2010 Start Oty: 10.00 Cust Item ID: Required Date: 5/14/2010 Reg'd Oty: 10.00 **Customer:** Reference: Start Run Process Plan: MF Date: 10-4-29 Approvals: Tooling: Date: Stop OC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Draw Draw Plan Reject Accept Reject Insp. Work Center ID Description **Run Hours** Number Rev. Oty Code Number Stamp Otv Draw Nbr Revision Nbr D3637 Rev B 100 0.00 FLOW WATER JET 1810-4-29 Wateriet 0.00 Memo \_ Prog Rev: FLOW CNC Waterjet 1-Cut as per Dwg D3637 Dwg Rev: Deburr if necessary 304.080 110 QC2- Inspect parts off machine FAI/FAIB 0.00 1810-4-29 0.00 Memo Quality Control 120 QC8- Inspect parts - second check 510/04/30

| Dart Aerospace Ltd | Dar | Aero | space | Ltd |
|--------------------|-----|------|-------|-----|
|--------------------|-----|------|-------|-----|

| W/O:    |      |                                | WO                | RK ORDER CHANGI  | ES   |      | Ges.               |       |                                     |                          |
|---------|------|--------------------------------|-------------------|--|------|------|--------------------|-------|-------------------------------------|--------------------------|
| DATE    | STEP | PR                             | PROCEDURE CHANGE  |  |      | - 1  | Date               | Qty   | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|         | T    |                                |                   |  |      |      |                    | # A A |                                     |                          |
|         | ,    |                                |                   |  | 30 2 |      |                    |       |                                     |                          |
| Part No |      | PAR #:                         |                   |  |      |      |                    |       |                                     |                          |
| NCR:    |      |                                |                   | R NON-CONFORMA   |      |      |                    |       | Date                                |                          |
| DATE    | STEP | Description of NC<br>Section A | Initial Chief Eng | Corrective Action Section Action Description Chief Eng | Sig  | ın & | Verific<br>Section |       | Approval<br>Chief Eng               | Approval<br>QC Inspector |
|         |      |                                | Office Eng        | Official Eng   |      | ate  |                    |       |                                     |                          |
|         |      |                                |                   |  |      |      |                    | 1.0   |                                     |                          |
|         |      |                                |                   |  |      |      |                    |       |                                     |                          |

### Work Order ID 58205

Thursday, April 29, 2010 10:36:43 AM



Page 2

Item ID:

D3637-041

Revision ID.

Item Name:

Bracket Assembly

Start Date:

4/29/2010

**Start Oty: 10.00** 

Required Date: 5/14/2010

Accept



Setup Start

Stop

Stop

Reg'd Otv: 10.00

Reference:

Approvals:

Process Plan:

OC:

Date: Date: Tooling:

SPC (Y/N):

Date:

Cust Item ID:

**Customer:** 

Draw

Number

Date:

Draw

Rev.

Run Start

Sequence ID/ Work Center ID

130

Brake NC

Brake NC

Operation Description

NC BRAKE

Memo Form as per Dwg D3637 Set Up/ **Run Hours** 

0.00

Code Qty

Accept

Plan

Reject Oty

Reject Insp. Number Stamp

140

Small Fab

Small Fab

Quality Control

Small Fab

Memo

Memo

1- drill holes as per dwg using DT8979 2-C'Sink as per Dwg D3637

Install Nut plate as per Dwg D3637

0.00

0.00

150

QC5- Inspect part completeness to step on W/O

| <b>Dart Aerospace Lt</b> |
|--------------------------|
|--------------------------|

| W/O:    |      |                          | WO           | RK ORDER CHANC               | GES    |         |         | 1000     |                                     | 1                        |
|---------|------|--------------------------|--------------|------------------------------|--------|---------|---------|----------|-------------------------------------|--------------------------|
| DATE    | STEP | PRO                      | OCEDURE CHAN | IGE                          | d      | Ву      | Date    | Qty      | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|         |      |                          |              |                              |        |         |         |          |                                     |                          |
|         |      |                          |              | - 32                         |        |         |         |          |                                     |                          |
|         |      |                          |              |                              |        |         |         |          | gyana I.                            | 10 pg - 2                |
| Part No |      | PAR #:                   |              |                              |        |         |         |          |                                     |                          |
|         | Re   | solution:                | Disposition  | :                            | QA     | N/C Clo | sed:    | <u> </u> | _ Date: _                           |                          |
| NCR:    |      |                          | 16.          | R NON-CONFORM                |        | (NCR    | )       |          |                                     |                          |
| DATE    | STEP | <b>Description of NC</b> | Initial      |                              | tion B | Sign &  | Verific |          | Approval                            | Approval                 |
|         |      | Section A                | Chief Eng    | Action Description Chief Eng |        | Date    | Section | on C     | Chief Eng                           | QC Inspector             |
|         |      |                          |              |                              |        |         | 4       |          |                                     |                          |
|         |      |                          |              |                              |        |         |         |          |                                     |                          |
|         |      |                          |              |                              |        |         |         |          |                                     |                          |
|         |      |                          |              |                              |        |         |         |          |                                     |                          |
|         |      |                          |              |                              |        |         |         |          |                                     |                          |

#### · Work Order ID 58205

Thursday, April 29, 2010 10:36:43 AM



Page 3

Item ID:

D3637-041

Revision ID:

**Item Name:** 

**Bracket Assembly** 

Start Date:

4/29/2010

Start Qty: 10.00 Required Date: 5/14/2010

Req'd Qty: 10.00

Reference:

Approvals:

Accept



Setup Start

Stop



**Cust Item ID: Customer:** 

Run

Start



QC:

**Process Plan:** 

Date: Date: **Tooling:** 

SPC (Y/N):

**Run Hours** 

Set Up/

Date: Date:

Stop

Sequence ID/ Work Center ID

160

Packaging

Packaging

Operation Description

Identify as per dwg & Stock Location: 244

0.00

0.00

Draw Number

Draw Rev.

Plan Accept Qty Code

Reject Qty

Reject Number Stamp

Insp.

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

Memo

0.00

10/05/12 AS

| Dart Ae | rospace | Ltd |                   |                      |                              |           |             |       |         |                                     |                                       |
|---------|---------|-----|-------------------|----------------------|------------------------------|-----------|-------------|-------|---------|-------------------------------------|---------------------------------------|
| W/O:    |         |     |                   | WC                   | ORK ORDER CHA                | NGES      |             |       |         |                                     |                                       |
| DATE    | STEP    |     |                   | PROCEDURE CHANGE     |                              |           | Ву          | Date  | Qty     | Approval<br>Chief Eng /<br>Prod Mgr | Approva<br>QC Inspect                 |
|         |         |     |                   |                      |                              |           | e. Seele    |       |         |                                     | 1900                                  |
|         |         |     |                   |                      | <u> </u>                     |           |             |       |         | a<br>ay                             |                                       |
|         |         |     |                   |                      |                              |           |             |       |         | me"                                 | 3.25                                  |
|         |         |     |                   |                      |                              |           |             |       |         |                                     | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| Part No | :       |     | PAR #:            | Fault Cate           | gory:                        | NC        | R: Yes      | No DO | A:      | _ Date: _                           |                                       |
|         |         |     |                   |                      | 1:                           |           |             |       |         |                                     |                                       |
| NCR:    | , . \-  |     |                   | WORK ORDE            | ER NON-CONFOR                | MANCI     | (NCR        | 1)    |         | and the second                      |                                       |
| DATE    | OTED    |     | Description of NC |                      | Corrective Action            | Section B |             | Vorif | ication | Approval                            | A                                     |
| DATE    | STEP    |     | Section A         | Initial<br>Chief Eng | Action Description Chief Eng | on        | Sign & Date |       | tion C  | Chief Eng                           | Approva<br>QC Inspect                 |
|         |         |     |                   |                      |                              |           |             |       |         |                                     |                                       |
|         |         |     |                   |                      |                              |           |             |       |         |                                     |                                       |
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|         |         |     |                   |                      |                              |           |             |       |         |                                     |                                       |

Thursday, April 29, 2010 10:36:42 AM

Work Order ID: 58205

Parent Item:

D3637-041

Parent Item Name:

Bracket Assembly

Comments:

IPP Rev:A New Issue 07-07-20 JLM

IPP Rev:B change to REV.B as per dwg 08-02-11 DD verified by:ec

Verified By:EC

Start Date: 4/29/2010

**Start Oty: 10.00** 

Required Date: 5/14/2010

Required Otv: 10.00

Component Item ID/ Item Name MS20426AD3-3

Replacement Mfg/ Item ID

Purch Purchased Bin Primary Item Location No

Last Location Route Seq ID 100

Unit of Measure Each

Hand 5.068.000

Oty on Oty per Kit Otv Issued Date Issued

Status

Rivet

ST316 19099 7681

Location

No

No

Loc Oty

5068 4774 294

140 sf Loc Code

138.6608

2.0 BIO-4-29

304SS sheet .080

MS21059L4

M304S14GA

Nutplate

Purchased

Purchased

MAT20

Location

113295

Loc Qty 138.6608 138.6608

140

Each

Loc Code

37.0000

113298

Location ST302

112243

Loc Qty 37

37

Loc Code

= m-h 10/05/10

|      | rospace | Ltd |                  |   |      |     |                                     | , ,                 |
|------|---------|-----|------------------|---|------|-----|-------------------------------------|---------------------|
| W/O: |         |     | WORK ORDER CH    | HANGES                                  |      |     |                                     |                     |
| DATE | STEP    |     | PROCEDURE CHANGE | Ву                                      | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approv<br>QC Inspec |
|      |         |     |                  |   |      |     |                                     |                     |
|      | -       |     |                  |   |      |     |                                     |                     |
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|      |         |     |                  | 9 0 1                                   |      |     |                                     |                     |
|      |         |     |                  |   |      |     |                                     |                     |

| Part No: |             | PAR #: | Fault Category: | NCR: Yes No DQA: | Date: |
|----------|-------------|--------|-----------------|------------------|-------|
|          | Resolution: | _ = 1  | Disposition:    | QA: N/C Closed:  | Date: |

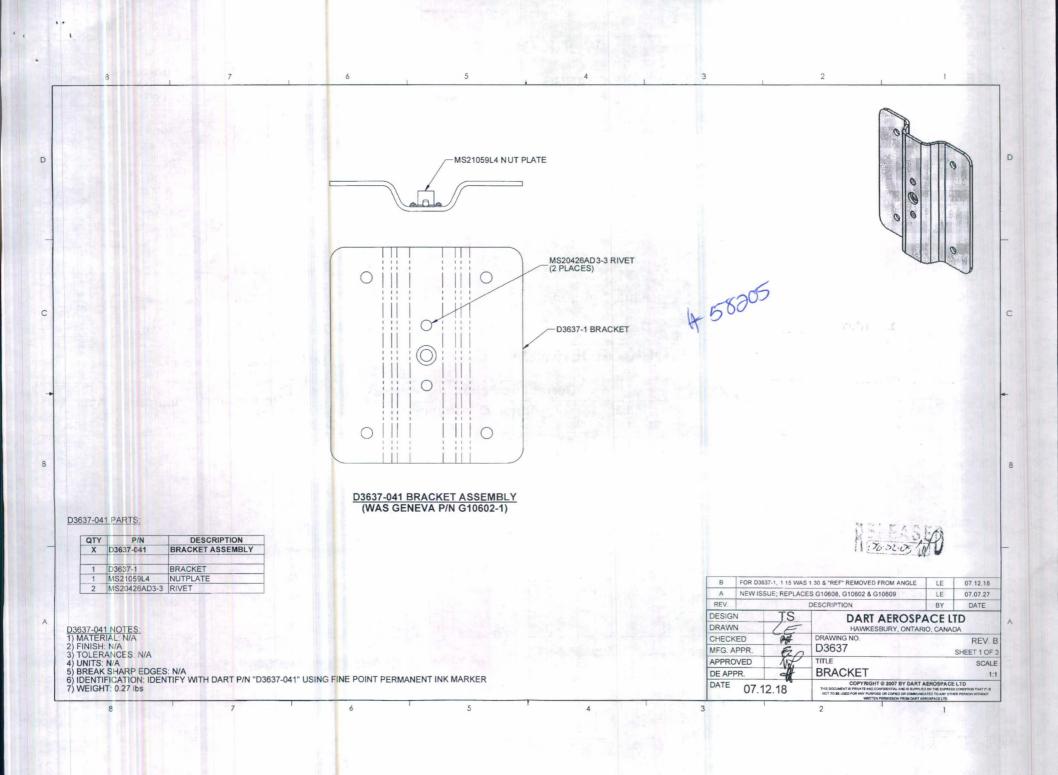
| NCR:         |      |                   | WORK ORDE            | R NON-CONFORMAN              | CE (NCR)       |              |                       |                          |
|--------------|------|-------------------|----------------------|------------------------------|----------------|--------------|-----------------------|--------------------------|
|              |      | Description of NC |                      | Corrective Action Section B  | 3              | Verification |                       |                          |
| DATE         | STEP | Section A         | Initial<br>Chief Eng | Action Description Chief Eng | Sign &<br>Date | Section C    | Approval<br>Chief Eng | Approval<br>QC Inspector |
|              |      |                   |                      |                              |                |              |                       |                          |
|              |      |                   |                      |                              |                |              |                       |                          |
|              |      |                   |                      |                              |                |              |                       |                          |
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|              |      |                   |                      |                              |                |              |                       |                          |
|              |      |                   |                      |                              |                | 4            |                       |                          |
| <u>li</u> te |      |                   |                      |                              | - 1            |              |                       |                          |

| DART AEROSPACE LTD           | Work Order: 5 | 8205        |
|------------------------------|---------------|-------------|
| Description: Bracket         | Part Number:  | D3637-1     |
| Inspection Dwg: D3637 Rev: B |               | Page 1 of 1 |

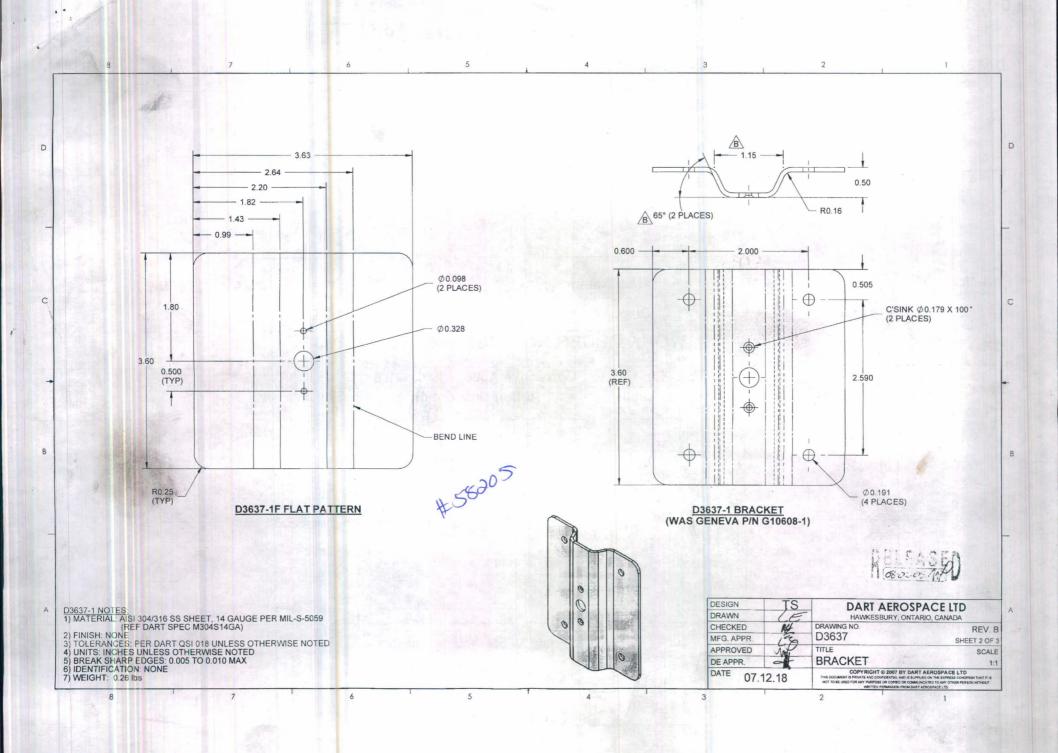
|                      | X                   | First Artic         | cle         | Proto     | type   |           |         |
|----------------------|---------------------|---------------------|-------------|-----------|--|-----------|---------|
| Drawing<br>Dimension | Tolerance           | Actual<br>Dimension | Accept      | Reject    | Method of<br>Inspection  | Con       | nments  |
| Ø0.098               | +0.004/-0.001       | 601.                | *           | - 19/19/5 | 26   |           | 77      |
| Ø0.328               | +0.006/-0.001       | .330                | æ           |           |  | 7 7       |         |
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| 3.60                 | +/-0.030            | 3.607               | X           |           | matter & I   |           |         |
| 1.80                 | +/-0.030            | 1.805               | 8           | d's       |  |           |         |
| 0.500                | +/-0.010            | ,500                | -           | 1.1       |  |           | 6       |
| 1.82                 | +/-0.030            | 1.833               | 82          |           |  |           |         |
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| ALTO LAST            |                     |                     | Mary In the |           |  |           | es.     |
|                      | ( Chickenson        |                     |             |           |  |           |         |
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|                      |                     | Meller.             | Mark of     | W. Wild   |  |           |         |
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| MANAGE NA            |                     |                     | State State |           |  |           | 13.00   |
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|                      |                     |                     |             |           |  |           |         |
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|                      | 14                  |                     |             | 1 1       | 141111   |           |         |
| easured by:          | 3                   | Audited by:         | 2           |           | Prototype A  | pproval:  | N/A     |
|                      | 10-4-29             | Date:               | 10/04/30    |           |  | Date:     | N/A     |
|                      | Change              |                     |             | Peril     | Re <sup>v</sup>  | vised, by | Approv  |

# **Dart Aerospace Ltd**

| W/O:    |      |                   | W                    | ORK ORDER CHANGES            |             |         |       |                                     |                          |
|---------|------|-------------------|----------------------|------------------------------|-------------|---------|-------|-------------------------------------|--------------------------|
| DATE    | STEP | PROC              | PROCEDURE CHANGE     |                              |             | Date    | Qty   | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|         |      |                   |                      |                              |             |         |       |                                     |                          |
|         |      |                   |                      |                              |             |         | 1     |                                     |                          |
| Part No |      | PAR #:            |                      |                              |             |         |       |                                     |                          |
|         | Re   | solution:         |                      |                              |             |         |       | Date:                               |                          |
| NCR:    |      | W                 | ORK ORD              | ER NON-CONFORMANC            | E (NCR      | )       |       |                                     |                          |
| DATE    | STEP | Description of NC |                      | Corrective Action Section B  |             | Verific | ation | Approval                            | Approval                 |
|         |      | Section A         | Initial<br>Chief Eng | Action Description Chief Eng | Sign & Date | Section | on C  | Chief Eng                           | QC Inspector             |
|         |      |                   |                      |                              |             |         |       |                                     |                          |
|         |      |                   |                      |                              |             |         |       |                                     |                          |
|         |      |                   |                      |                              |             |         |       |                                     |                          |

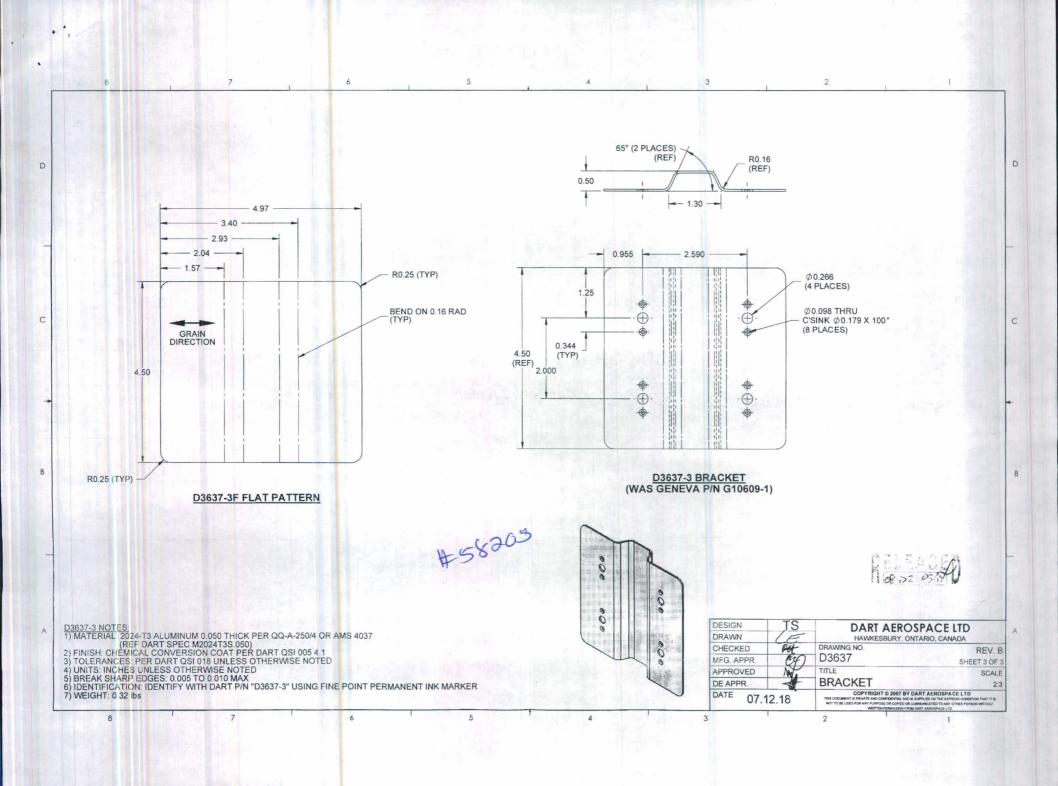


| Dart Ae | rospace | Ltd               |                      |                              |                |         |       |                                     |                        |
|---------|---------|-------------------|----------------------|------------------------------|----------------|---------|-------|-------------------------------------|------------------------|
| W/O:    |         |                   | WC                   | ORK ORDER CHANGES            |                |         |       |                                     |                        |
| DATE    | STEP    | PRO               | CEDURE CHA           | NGE                          | Ву             | Date    | Qty   | Approval<br>Chief Eng /<br>Prod Mgr | Approva<br>QC Inspecto |
|         | -       |                   |                      |                              |                |         |       |                                     |                        |
|         |         |                   |                      |                              |                |         |       |                                     |                        |
| Part No | :       | PAR #:            | Fault Cate           | gory:N                       | CR: Yes        | No DQA  | \:    | _ Date: _                           |                        |
|         | Re      | esolution:        | Disposition          | n: Q                         | A: N/C CI      | osed:   |       | Date: _                             |                        |
| NCR:    | led .   | V                 | VORK ORDI            | ER NON-CONFORMANC            | E (NCF         | R)      |       |                                     |                        |
| DATE    | OTED    | Description of NC | 1 -                  | Corrective Action Section B  |                | Verific | ation | A                                   | A                      |
| DATE    | STEP    | Section A         | Initial<br>Chief Eng | Action Description Chief Eng | Sign &<br>Date | Section |       | Approval<br>Chief Eng               | Approva<br>QC Inspecto |
|         |         |                   |                      |                              |                |         |       |                                     |                        |
|         |         |                   |                      |                              |                |         |       |                                     |                        |



| Dart Aerospace Ltd |      |  |                    |
|--------------------|------|--|--------------------|
| W/O:               |      |  | WORK ORDER CHANGES |
| DATE               | STEP |  | PROCEDURE CHANGE   |

| DATE    | STEP | PROCEDURE CHANGE    |           |                             |                              |                      | y    | Date         | Qty      | Approval<br>Chief Eng /<br>Prod Mgr | Approva<br>QC Inspector  |
|---------|------|---------------------|-----------|-----------------------------|------------------------------|----------------------|------|--------------|----------|-------------------------------------|--------------------------|
|         |      |                     |           |                             |                              |                      |      |              |          |                                     |                          |
|         |      |                     | -         |                             |                              |                      |      |              |          |                                     |                          |
| Part No |      |                     | PAR #:    | Fault Categ                 | ory:                         | NCR: \               | es N | o DQA        | \:       | _ Date: _                           |                          |
|         |      |                     |           | Disposition: QA             |                              |                      |      |              |          |                                     |                          |
| NCR:    |      | 1 12 14 15 15 16 16 |           | WORK ORDE                   | R NON-CONFORM                | MANCE (N             | ICR) |              | 1        |                                     |                          |
| DATE    | 0770 | Description of NC   |           | Corrective Action Section B |                              |                      |      | Verification | Anneoval | A                                   |                          |
| DATE    | STEP | Section             | Section A |                             | Action Description Chief Eng | cription Sign & Date |      | Section C    |          | Approval<br>Chief Eng               | Approval<br>QC Inspector |
|         |      |                     |           |                             |                              |                      |      |              |          |                                     |                          |
|         |      |                     |           |                             |                              |                      |      |              |          |                                     |                          |
|         |      |                     |           |                             |                              |                      |      |              |          |                                     | 2                        |



| Dart Ae | rospace I | Ltd               |                      |                              |              |                               |                        |                         |
|---------|-----------|-------------------|----------------------|------------------------------|--------------|-------------------------------|------------------------|-------------------------|
| W/O:    |           |                   | WC                   | ORK ORDER CHANGES            | S            |                               |                        |                         |
| DATE    | STEP      | PR                | OCEDURE CHA          | Ву                           | Date Q       | Approval Chief Eng / Prod Mgr | Approva<br>QC Inspecto |                         |
|         | T         |                   |                      |                              |              |                               |                        |                         |
|         |           |                   |                      |                              |              |                               |                        |                         |
| Part No |           | PAR #:            |                      |                              |              |                               |                        |                         |
| NCR:    |           |                   |                      | ER NON-CONFORMAN             | -1-S Pt.     |                               |                        |                         |
|         |           | Description of NC |                      | В                            | Verification |                               |                        |                         |
| DATE    | STEP      | Section A         | Initial<br>Chief Eng | Action Description Chief Eng | Sign & Date  | Section C                     |                        | Approval<br>QC Inspecto |
|         |           |                   |                      |                              |              | 12.5                          |                        |                         |
|         |           |                   |                      |                              |              |                               |                        |                         |